

### REMARKS

There are now pending in this application Claims 1, 2, and 4-30, of which Claim 1 is the sole independent claim. Claim 3 has been cancelled without prejudice or waiver of its subject matter, the subject matter of which has been incorporated into Claim 1, and no claims have been added. Claims 8-10, 12-15, 17-20, 23-25, and 27-30 have been withdrawn from consideration.

In view of the above amendments and the following remarks, favorable reconsideration and allowance of the above application is respectfully sought.

Applicants' invention as now set forth in independent Claim 1 is directed to an electromagnetic actuator comprising a core with a coil wound around the core, two stators magnetically coupled to each end of the core, a movable element which is displaceable relative to the stators and a supporting means for supporting the movable element. As now set forth in independent Claim 1 the invention is characterized in that the supporting means, the stators and the movable element are made of the same material, and that the stators and the movable element each have a projection and a depression in such a way that the projection and depression of the stators engage with the projection and the depression of the movable element, the side surfaces of the projection and depression being parallel to the displacement direction of the movable element and partially overlapping even if there is no electromagnetic force.

Independent Claim 1 stands rejected under 35 U.S.C. § 103(a), as being unpatentable over Witschi, et al. The rejection is respectfully traversed.

Applicants respectfully submit that Claim 1, particularly as amended, is neither taught nor suggested by Witschi, et al. More specifically, Applicants submit that there is no

teaching or suggestion of the side surfaces of the projection and depression being parallel to the displacement direction of the movable element so as to simplify the manufacturing of the projection and depression.

More specifically, Witschi, et al. expressly recites that “an area segment thus disposed satisfies the refraction condition wherein the field, on leaving one part, does not strike the segment of the air gap marginal area perpendicularly.” (Page 2, lines 4-5). However, if the side surfaces of the projection and depression was parallel to the displacement direction of the movable element, then the magnetic field would be incident thereon perpendicularly. Consequently, it is Applicants’ understanding of Witschi, et al. that it does not disclose or suggest an apparatus wherein side surfaces of the projection and depression are parallel to the displacement direction of the movable element and partially overlapping even if there is no electromagnetic force.

Applicants acknowledge that Witschi, et al. does disclose a device with stators made of the same material as of the movable element. However, Applicants do not understand there to be a description about the material of the reference system which combines them. In contrast, in the present invention both the stators and the movable element are made of one base material by patterning, which is advantageous in allowing for accurate alignment. Such advantages are not understood to be suggested by the art of record.

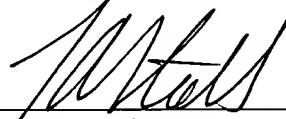
For the foregoing reasons, Applicants respectfully submit that independent Claim 1 is patentable over the applied art of record. The remaining claims in the above-identified application are dependent claims which depend either directly or indirectly from Claim 1 and are therefore patentable over the art of record for reasons noted above with respect to

Claim 1. In addition, each recite features of the invention still further distinguishing them from the applied art. Favorable and independent consideration thereof is respectfully sought.

Applicants respectfully submit that all outstanding matters in the above application have been addressed and that this application is in condition for allowance. Favorable reconsideration and early passage to issue of the above application are respectfully sought.

Applicants' undersigned attorney may be reached in our Washington, D.C. office by telephone at (202) 530-1010. All correspondence should continue to be directed to our below listed address.

Respectfully submitted,

A handwritten signature in dark ink, appearing to read 'L. Stahl', is written over a horizontal line.

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